

I CLAIM:

1. A cable assembly comprising:  
an insulating housing defining a plurality of channels;  
a plurality of circuit boards juxtaposed in corresponding channels of the housing; and  
a plurality of high-speed cables and a plurality of low-speed cables terminated to corresponding circuit boards and arranged in such a manner that the plurality of low-speed cables are surrounded by the plurality of high-speed cables.
2. The cable assembly as described in claim 1, wherein the high-speed cables are used for transmitting differential pairs of signals and the low-speed cables are used for transmitting single-ended signals.
3. The cable assembly as described in claim 1, wherein each high-speed cable comprises a pair of wires and a grounding wire.
4. The cable assembly as described in claim 1, wherein the low-speed cables are arranged in pairs, each low-speed cable comprising an insulated, conductive core, a metal braid outside the insulated, conductive core, and a protective jacket enclosing the metal braid.
5. The cable assembly as described in claim 1, wherein at least two of the circuit boards terminate with only high-speed cables.
6. The cable assembly as described in claim 1, wherein at least one of the circuit boards terminates with both high-speed cables and low-speed cables.
7. The cable assembly as described in claim 1, wherein a cable clamp binds the cables terminated to a common circuit board together.

8. The cable assembly as described in claim 7, wherein the cable clamp comprises a first and a second stamped metallic sections clamping opposite sides of the cables.

9. The cable assembly as described in claim 8, wherein the first section defines a plurality of rooms and the second section depresses the cables into the rooms.

10. The cable assembly as described in claim 9, further comprising a first fastening element and wherein each cable clamp defines a through hole for insertion of the first fastening element.

11. The cable assembly as described in claim 10, further comprising a second fastening element and wherein each circuit board defines a first through hole and the housing defines a pair of second through holes aligned with the first through holes for insertion of the second fastening element.

12. The cable assembly as described in claim 1, further comprising a cover having first and second halves jointed together and being attached to the housing, the cover defining a bore extending through the first and the second halves.

13. The cable assembly as described in claim 12, further comprising a third fastening element inserting through the bore of the cover.

14. A cable assembly comprising:

an insulating housing defining a plurality of channels;

a plurality of outer circuit modules oppositely arranged in the housing, each outer circuit module comprising a circuit board received in a corresponding channel of the housing, a plurality of high-speed cables terminated to the circuit

board, and a grounding plate attached to one side of the circuit board opposite to the high-speed cables; and

a plurality of inner circuit modules sandwiched by the outer circuit modules, each inner circuit module comprising a circuit board received in a corresponding channel of the housing, at least two high-speed cables electrically connecting to the circuit board, a plurality of low-speed cables arranged between the at least two high-speed cables and terminated to the circuit board, and a grounding plate attached to one side of the circuit board opposite to the at least two high-speed cables and the low-speed cables.

15. The cable assembly as described in claim 15, wherein the high-speed cables are used for transmitting differential pairs of signals and the low-speed cables are used for transmitting single-ended signals.

16. The cable assembly as described in claim 15, wherein each high-speed cable comprises a pair of wires and a grounding wire.

17. The cable assembly as described in claim 15, wherein the low-speed cables are arranged in pairs, each low-speed cable comprising an insulated, conductive core, a metal braid outside the insulated, conductive core, and a protective jacket outside the metal braid.

18. The cable assembly as described in claim 15, wherein each circuit module further comprises a cable clamp bonding the cables together.

19. The cable assembly as described in claim 15, further comprising a cover cooperating with the housing.

20. A cable assembly comprising:

an insulative housing;  
a plurality of conductive elements disposed in the housing; and  
a plurality of first type cables and a plurality of second type cables terminated  
at said plurality of elements, respectively; wherein  
all of said first type cables and second type cables are arranged in matrix, and  
said first type cables are dispersively located on a periphery of said second type  
cables, respectively.

21. The cable assembly as described in claim 20, further including a cover  
attachably positioned on a rear portion of the housing to surround said first type  
cables and protectively enclose front portions of both said first type cables and said  
second type cables therein.